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TITLE : ORGANIC ELECTROLYTE BATTERY

ABSTRACT : PURPOSE: To provide an organic electrolyte battery having excellent heavy-load characteristic, low-temperature characteristic and preservation stability by using a phosphoric triester as an electrolyte solvent.

CONSTITUTION: Either a phosphoric triester alone or mixture of two or more phosphoric triesters can be used as an electrolyte solvent in an organic electrolyte battery. Compounds such as $(\text{CH}_3\text{O})_3\text{P}=\text{O}$, $(\text{C}_2\text{H}_5\text{O})_3\text{P}=\text{O}$, $(\text{C}_3\text{H}_7\text{O})_3\text{P}=\text{O}$, $(\text{C}_4\text{H}_9\text{O})_3\text{P}=\text{O}$, $(\text{C}_8\text{H}_{17}\text{O})_3\text{P}=\text{O}$, $(\text{ClCH}_2\text{CH}_2\text{O})_3\text{P}=\text{O}$, $(\text{Cl}_2\text{C}_3\text{H}_5\text{O})_3\text{P}=\text{O}$, $(\text{C}_6\text{H}_5\text{O})_3\text{P}=\text{O}$ and $(\text{CH}_3\text{C}_6\text{H}_4\text{O})_3\text{P}=\text{O}$ are listed as phosphoric triesters. By using such phosphoric triesters as electrolyte solvents, decomposition of a super-acid-system electrolyte such as LiPF_6 , LiBF_4 , LiAsF_6 or LiSbF_6 is suppressed increasing the stability of electrolyte thereby improving the storage stability of the battery. In such a battery, the characteristics of the super-acid-system electrolyte such as a high solubility in the solvent, a high conductivity and a higher stability than that of a perchlorate system compound can effectively be exhibited.

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